

REMARKS

This Amendment is in response to the Office Action dated December 3, 2002. Claims 1-15 are pending in the present application. Claims 1, 6 and 11 have been amended, and claims 16, 17 and 18 have been added. Accordingly, claims 1-18 are pending in the present application.

Amended Claims

Applicants have amended independent claims 1, 6 and 11 to describe the present invention more clearly. In particular, claims 1, 6 and 11 were amended to recite that the query-specified data is located "on a stabilized data page" and that the data manager writes the data on the stabilized data page to a buffer "while maintaining the stabilization of the data page." Support for these amendments are found in claims 4, 5, 9, 10, 14 and 15 and in the Specification on page 7, lines 12-20. No new matter has been presented.

New Claims

Applicants have added claims 16, 17 and 18, which incorporate the limitations of claims 4, 9 and 14 into independent claims 1, 6 and 11, respectively. No new matter has been presented.

Foreign Priority

The Examiner has noted that Applicants have apparently failed to file a certified copy of the foreign (Canadian) patent application from which this application claims priority. Applicants respectfully submit that a certified copy of the foreign patent application was filed along with the present application on January 10, 2001. Evidence of this fact can be found in the cover sheet accompanying Applicants' January 10, 2001 filing, as well as in the self-addressed stamped postcard, which was returned to Applicants' attorneys. Accordingly, Applicants respectfully

submit that the claim for foreign priority was perfected.

35 U.S.C. § 102 Rejections

The Examiner rejected claims 1-15 under 35 U.S.C. §102(b) as being anticipated by Bierma et al. (U.S. Patent No. 5,758,149). In so doing, the Examiner stated:

With respect to claim 1, Bierma discloses a) utilizing a query processor to call a data manager and request the return of data from the set of data (see figs 1, 2 and 5, query processor (item 10), database query (item 212) for query program (item 214) of DBMS (item 220) as data manager (col. 3, lines 20-26 and lines 40-52; also col. 11, lines 44-60 and col. 8, lines 56-64); b) allowing the data manager to locate query-specified data and make a determination regarding the query-specific data (col. 8, lines 56-64); c) utilizing the data manager to write the query-specified data to a buffer based on the determination (see fig 2, query buffer (item 50 and 52) and col. 6, lines 42-54; also col. 7, lines 45-52 and col. 19, lines 9-21); and d) utilizing the query processor to retrieve the query-specified data from the buffer (col. 11, lines 50-55). . . .

With respect to claim 4, Bierma discloses 1) locating a page containing query-specified data (col. 25, lines 38-48; also col. 12, lines 35-44); 2) stabilizing the page (col. 25, lines 38-55); and 3) accessing the page (col. 7, lines 15-26).

With respect to claim 5, Bierma discloses maintaining the stabilization of the page, while the data manager writes all the query-specified data on the page to the buffer (col. 19, lines 8-20).

Applicants respectfully traverse. The present invention is directed to a method and system for processing a database query on a set of data stored on a plurality of data pages in a database management system. In accordance with the present invention, a query processor calls a data manager to request the return of query-specified data from the set of data. The data manager locates the query-specified data on a stabilized data page and, if appropriate, writes the query-specified data to a buffer while maintaining the stabilization of the data page. The query processor then can retrieve the query-specified data from the buffer.

By writing the query-specified data to a buffer, instead of returning the data directly to the query processor, and maintaining the stabilization of the data page, the data manager operates

more efficiently because it can continue to locate query-specified data without repeatedly restabilizing the data page. Query execution is more efficient because the number of times a data page is stabilized is minimized.

The present invention, as recited in claim 1, provides:

1. A method for processing a database query on a set of data stored on a plurality of data pages in a database management system, the method comprising the steps of:
 - a) utilizing a query processor to call a data manager and request the return of data from the set of data;
 - b) allowing the data manager to locate query-specified data on a stabilized data page and make a determination regarding the query-specified data;
 - c) utilizing the data manager to write the query-specified data on the stabilized data page to a buffer based on the determination while maintaining the stabilization of the data page; and
 - d) utilizing the query processor to retrieve the query-specified data from the buffer.

Independent claims 6 and 11 are claims for a system and a computer readable medium containing program instructions, respectively, that are similar in scope to claim 1.

Bierma is directed to a system for concurrent processing of queries and transactions against a shared database. In contrast to the present invention, Bierma fails to teach or suggest "allowing the data manager to locate query-specified data on a stabilized *data page*," as recited in claims 1, 6, and 11. Instead, Bierma's data manager locks or stabilizes a file control structure that is associated with a query specified table (col. 15, lines 1-3; Figure 10A) or an index page that satisfies a query predicate (col. 25, lines 39-41) while query-specified data is located on a *data page*. Applicants respectfully submit that the file control structure and the index page are not a *data page* that stores query-specified data. Rather, the file control structure and the index page contain information *related* to the data stored on the data pages in the database. Accordingly, Bierma fails to teach or suggest "allowing the data manager to locate query-specified data on a stabilized *data page*," as recited in claims 1, 6, and 11.

Attorney Docket: CA920000015/1852P

Moreover, even if one construed the file control structure or the index page to be a data page, which they are not, Bierma would still fail to teach or suggest "utilizing the data manager to write the query-specified data on the stabilized data page to a buffer," as recited in claims 1, 6 and 11. As stated above, the file control structure and the index page contain information *related* to the data stored on the data pages in the database. That information is not written into the query buffer. Rather, Bierma clearly indicates that the data that is written into the query buffer is data stored *in the database*, and not information contained in either the file control structure or the index page.

Applicants respectfully submit that Bierma fails to teach or suggest the combination of elements recited in claims 1, 6 and 11. Accordingly, claims 1, 6 and 11 are allowable over the cited reference. Claims 2-5, 7-10, and 12-15 depend on claims 1, 6 and 7, respectively, and the above arguments apply with full force. Therefore, claims 2-5, 7-10, and 12-15 are also allowable over the cited reference.

Claims 16, 17 and 18 are Allowable

New claims 16, 17 and 18 define further the novelty and scope of the present. For various reasons, including those stated above, Applicants respectfully submit that claims 16, 17 and 18 are allowable over Bierma.

Conclusion

In view of the foregoing, it is submitted that the claims 1-18, as now presented, are allowable over the cited reference and are in condition for allowance. Applicants respectfully request reconsideration of the rejections and objections to the claims, as now presented.

Applicants believe that this application is in condition for allowance. Should any

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FROM-SAWYER LAW GROUP LLP

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Attorney Docket: CA920000015/1852P

unresolved issues remain, Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted,

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Date


Joyce Tom
Sawyer Law Group LLP
Attorneys for Applicant(s)
Reg. No.: 48,681
(650) 493-4540